

Clark, Jon

From: Clark, Jon
Sent: Wednesday, October 06, 2010 2:48 PM
To: Cynthia Dill
Subject: Bill draft

Hello Rep. Dill. Hope you had a good summer. I'm just checking in with you on your bill drafting request, An Act to Bring a Green Data Mill to Maine. We're trying to get a little jump on drafting. If you have further information you could share on your bill, I might be able to move it along. If you don't, no problem: we're not trying to rush anyone. But if you have the details of what you want this bill to do, I'd be happy get the drafting started.

Thanks.

Jon

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Clark, Jon

From: Cynthia Dill
Sent: Thursday, October 21, 2010 3:05 PM
To: Clark, Jon
Subject: green data mill

This email reminded me I owed you a response. The articles below are interesting.

My vision for the bill is to provide a mechanism for a data mill to be located in Maine. I understand from people familiar with this stuff (Josh Broder, Fletcher Kittredge and Matt Jacobsen) that the major challenge is the cost of power. Fletcher mentioned he believed the state of Maine had some ownership or charter on some portion of some river that produced hydro power. Sorry to be so vague. I think he said it was the Penobscot of Presumpscot...anyway, can you find out if this is true?

Also, I read that Elliot Cutler has an idea about a tax credit or something like that in his economic plans that relate to power. can you look in to that?

Either of these options could be in the bill, along with necessary streamlining of permitting to attract a data mill.

Thanks,
Cynthia

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-----Original Message-----

From: Fabiola Carrion <fcarrion@progressivestates.org>
To: dillesquire@aol.com
Sent: Thu, Oct 21, 2010 2:20 pm
Subject: More information on Data Centers and our Legislative Retreat

Rep. Dill,

Hope you are doing well. I found the following sources on green data centers, which I thought you may find useful:

EarthTechling - [Yahoo Data Roosts In Energy Efficiency](#)

EarthTechling - [Are Facebook Data Centers Going Green??](#)

New York Times - [Facebook Responds to Greenpeace's Coal Criticism](#)

Data Center Knowledge - [Verizon Eyes NY State for Major Data Center](#)

Pike Research - [Green Data Centers](#): This Pike Research report examines global green data center trends, and forecasts the size and growth of the market opportunity by region and technology through 2015. The report analyzes new developments in power and cooling infrastructure, server, storage and network technology and software management systems that are underpinning green data centers. The study also profiles the strategies of key players in terms of their market approach, technical innovations, and internal efforts to create energy efficient data centers.

**You need an account to view this report, however, you can download free sample content.

***The Green IT Report's blog [[The green data centre market - \\$40bn by 2015](#)] offers a summary of Pike's report.

I also wanted to make sure you received an invitation to our Legislators' Leadership Retreat, taking place in Atlanta from December 6th to the 8th. The retreat is limited to a select group of the nation's top progressive state legislators, and functions as an opportunity to craft strategies and make concrete plans with legislative peers and advocate allies from across the country to advance a progressive agenda in the coming session. We will have a workshop based on broadband, which I would love for you to attend and hopefully participate.

Let me know if you have any questions about the information I just shared with you about data centers and/or our retreat in general.

We hope to see you in Atlanta,

Fabiola Carrion

10/21/2010

Clark, Jon

From: Clark, Jon
Sent: Wednesday, October 27, 2010 12:14 PM
To: 'fkittred@ghi.net'
Subject: Rep. Dill legislation

Hello:

Rep. Dill has filed a request for a bill, which I'm drafting for her, to promote the location of a green data mill in Maine. She indicated that you had suggested that a significant challenge in locating a data mill in Maine is the cost of power. She mentioned you had indicated some State ownership of or a State charter related to a hydro power unit that might be turned to use in supplying low cost power to a data mill. She said I could check with you on this. Do you have further details? Any information you may be able to provide would be very helpful. Thanks.

Jon

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10/27/2010

Clark, Jon

From: Clark, Jon
Sent: Monday, November 08, 2010 2:54 PM
To: Cynthia Dill
Subject: RE: green data mill

Cynthia,
I talked with Fletcher Kittredge. He said he doesn't see hydro as related to green data mills -- I guess he'd mentioned to you some hydro units, governed by state charter, that are associated with paper mills, but he didn't mean to suggest that this offered a model useful for data mills. I don't see any possibilities there, either. He did emphasize that the cost of power is the big obstacle. He noted that one can locate these mills just about anywhere, that they don't need to be located in proximity to the associated data needs, so cost of power becomes the main factor in locating them. Though ME energy prices look pretty good compared with the rest of New England, New England is costly compared with other parts of the country. The best negotiated rate in ME might be about 7 cents; in VA, with cheap coal, the cost is about 2 cents; it's very difficult to compete with that. Indeed, absent heavy state subsidies, it would be hard to get anywhere close to that price.

He said he did not see any regulatory barriers that needed to be addressed. He indicated that any regulatory issues would be the federal level, not the state level.

He indicated he doesn't currently have any idea how the State could realistically attract a data mill, but he said he would be contacting you to talk some more about the matter. He did mention there might be possibilities for marketing ME to Canadian companies who might want build a data mill in the states, based on cost of power in ME relative to other border states, but this was just off the top of his head. In the end, he didn't sound very hopeful that there was a legislative means realistically to attract green data mills.

Do you still want me to try to draft something? I can sit on this for a bit, if you'd like, while you discuss with Fletcher. He indicated he might be willing to get some folks together to think further about the issue. Let me know how you'd like me to proceed.

Thanks.
Jon

From: Cynthia Dill
Sent: Thursday, October 21, 2010 5:30 PM
To: Clark, Jon
Subject: Re: green data mill

yes, yes and I'm not sure what the various permitting would be, but wish to identify it and possible streamline it (is this what the wind task force did?)

thanks

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-----Original Message-----

From: Clark, Jon <Jon.Clark@legislature.maine.gov>
To: Cynthia Dill <dillesquire@aol.com>
Sent: Thu, Oct 21, 2010 5:01 pm
Subject: RE: green data mill

Thanks Cynthia. May I talk with Josh or Fletcher or Matt about your bill and their ideas? I think they may be a bit confused. I suspect they may be thinking of the fact that owners of hydro facilities acquired the authority to create dams and impoundments through private and special laws enacted years ago. If so, I'm not sure what help that would be to your goal of attracting a data

11/8/2010

Clark, Jon

From: Clark, Jon
Sent: Tuesday, November 09, 2010 10:48 AM
To: 'mike@federlemahoney.com'
Subject: T Mobile question

Hello Mike. I'm working on something for a legislator and a question has arisen about T Mobile. When it located its call center in ME (Oakland?), were there State incentives involved? If so, what were they and were they determinative in terms of locating in ME? Whatever information you could share would be very helpful. Thanks.

Jon

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11/9/2010

Clark, Jon

From: Cynthia Dill
Sent: Wednesday, November 10, 2010 10:18 PM
To: Clark, Jon
Subject: Re: data centers

I think I want you to draft a bill that would do just that! One that can be supported by Matt Jacobsen.

Are you up for it?

Cynthia

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-----Original Message-----

From: Clark, Jon <Jon.Clark@legislature.maine.gov>
To: Cynthia Dill <dillesquire@aol.com>
Sent: Wed, Nov 10, 2010 12:08 pm
Subject: FW: data centers

Cynthia,
Here's Matt's reply. Sounds like ME would have a lot of hurdles to clear and need to come up with a pretty hefty financial package to really compete. What do you think?
Jon

From: Clark, Jon
Sent: Wednesday, November 10, 2010 5:06 PM
To: 'Matt Jacobson'
Subject: RE: data centers

Matt,
Thanks you very much for your prompt and very helpful reply. It sounds like a number of pretty significant hurdles. Assuming ME could clear the weather, work force, and fiber hurdles (multiple fiber redundancy seems like a tough one), it sounds as though significant financial incentives (tax breaks or energy discounts) would need to be put on the table. I will discuss with Rep. Dill and see how she would like to proceed.
Thanks again.
Jon

From: Matt Jacobson [<mailto:mjacobson@maineco.org>]
Sent: Wednesday, November 10, 2010 4:41 PM
To: Clark, Jon
Subject: RE: data centers

Jon,

Thanks so much for reaching out.

This is an ambitious idea. Data Centers are "hot" right now for companies and many are being constructed around the world. Many states and countries covet these developments and competition is fierce. We have studied successful location efforts and have learned, as you correctly point out, that energy costs are a significant factor in these location decisions. While energy plays a significant role, it is not the only criteria

11/15/2010

Clark, Jon

From: Clark, Jon
Sent: Saturday, November 13, 2010 4:14 PM
To: Matt Jacobson
Subject: RE: data centers

Thanks Matt. From your previous emails, I thought this would be your assessment, but this makes the point very clear. I'll talk again with Rep. Dill. I do very much appreciate your time on this.
Jon

-----Original Message-----

From: Matt Jacobson [mailto:mjacobson@maineco.org]
Sent: Sat 11/13/2010 6:51 AM
To: Clark, Jon
Subject: RE: data centers

1. Can we compete? Sure - for the right price. However, there is a broader policy question here: Should Maine put resources against these facilities versus some other opportunity. I do not think Maine has a particular competitive advantage here (education pipeline, whether that precludes power/connectivity interruption, proximity to data users, etc). Chasing any sought-after opportunity puts us in competition with many others who have more resources than we do. Data centers would not be my first choice for an extensive attraction effort.

2. That said, at a minimum we would need to make the effective energy cost around \$0.04/kwh. Market rates in southern Maine are in the \$0.10/kwh range, so we'd have subsidize around six cents/kwh for a long time - say 10 years. Assume a 20,000sqft facility would use 4mw. Here is what that looks like:

$(1000 \text{ kw/mw}) (4\text{mw}) (0.06\$/\text{kw-hr}) (24\text{hr}/\text{day}) = 5,760\$/\text{day}$

$(5,760\$/\text{day}) (365\text{day}/\text{yr}) (10\text{yr}) = \21M or about \$2.1M in cash per year.

If we are prepared to offer that level of cash incentive, for 15-20 jobs, we could compete.

Please let me know if you need more.

best,
Matt

From: Clark, Jon [mailto:Jon.Clark@legislature.maine.gov]
Sent: Friday, November 12, 2010 7:55
To: Matt Jacobson
Subject: RE: data centers

Thank you. Do you think ME can realistically compete with NY? If so, do you think we should offer the same or similar

location decisions. While energy plays a significant role, it is not the only criteria companies use.

We have found that companies evaluate location (in relation to their existing IT department) weather/disaster susceptibility, work force and education availability, tax incentives, power costs and fiber availability (redundancy of carrier options is critical here. We've seen location requests that demand 5 to 10 carriers for a location to be considered).

To your specific question, I'm not sure what the criteria would be to qualify as a "green data center." I can speak to two recent location decisions:

1. Yahoo announced to locate a new facility in Lockport, NY. State and local governments gave them over \$200M in tax breaks over 10 years - part of the local incentive was forgiveness of property taxes for 10 years. Yahoo also received \$58M in energy discounts (over 10 years) and \$10M in a Federal Stimulus grant.
2. Verizon is currently evaluating a proposal from Somerset, NY. State and local government has offered tax incentives of \$512M over 10 years. Verizon is also offered \$96M in energy discounts (over 15 years).

We've seen opportunities for smaller centers too. Smaller centers still require low electricity costs, employ fewer people (we have seen proposals for fewer than 20 new jobs) and command less tax incentive.

I'm happy to discuss this further if you need more detail.

best regards,
Matt

Matt Jacobson
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From: Clark, Jon [mailto:Jon.Clark@legislature.maine.gov]
Sent: Wednesday, November 10, 2010 15:33
To: Matt Jacobson
Cc: Cynthia Dill
Subject: data centers

Mr. Jacobson:

Rep. Cynthia Dill is developing legislation designed to attract a green data center ("mill") to Maine. She suggested I check with you to see if you might have ideas as to what might be done to attract such a mill to the State.

A significant hurdle to locating in ME is obviously cost of power, given that mill operating costs are dominated by energy costs. ME's electricity prices, though competitive in New England, are obviously high compared with most other areas of the country. Have you any thoughts as to how this hurdle might be addressed or at least reduced specifically with respect to data mills?

Any other thoughts you might have on encouraging construction of a green data mill in State would be welcome.

Thank you in advance for whatever ideas you may be able to offer.

Jon

Clark, Jon

From: Clark, Jon
Sent: Tuesday, January 04, 2011 12:57 PM
To: Cynthia Dill
Subject: RE: data centers

Hi Cynthia,
Can you give me your direction on this? I need enough by cloture this Friday to be able to draft it. One thought that occurred to me, given the complexities here in terms of finding a way to fund a subsidy that would attract one of these data centers, would be to direct perhaps the PUC and DECD to examine the issues and work with experts to come back with a plan for how to fund and structure incentives sufficient to attract a data mill. Just a thought.
Jon

-----Original Message-----

From: Clark, Jon
Sent: Wednesday, November 24, 2010 9:41 AM
To: Cynthia Dill
Subject: RE: data centers

Hi Cynthia. Checking in to see how you wish to proceed on this bill. Do you want me to draft the \$21M-over-10-year energy subsidy? If so, where do you wish the funds to come from?
Thanks.
Jon

-----Original Message-----

From: Clark, Jon
Sent: Saturday, November 13, 2010 4:34 PM
To: Cynthia Dill
Subject: RE: data centers

Cynthia, Here's further information from Matt on data centers. He doesn't seem very supportive of ME trying to compete for these centers, given the need to provide expensive subsidies in order to compete and the relatively modest economic benefits he sees. However, I can certainly draft something that provides the \$21M-over-10-year energy subsidy he mentions (perhaps limited to those data centers that meet energy efficiency standards established and approved by Eff ME?). If you want me to put a draft together, let me know whom you want to pay for the subsidy: ratepayers or taxpayers.
Jon

-----Original Message-----

From: Matt Jacobson [mailto:mjacobson@maineco.org]
Sent: Sat 11/13/2010 6:51 AM
To: Clark, Jon
Subject: RE: data centers

Clark, Jon

From: Cynthia Dill
Sent: Tuesday, January 04, 2011 3:41 PM
To: Clark, Jon
Subject: Re: Data Centers at Renewable Energy Sites

Yes. That sounds good. Thank you for your patience and work on this.

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-----Original Message-----

From: Clark, Jon <Jon.Clark@legislature.maine.gov>
To: Cynthia Dill <dillesquire@aol.com>
Sent: Tue, Jan 4, 2011 2:48 pm
Subject: RE: Data Centers at Renewable Energy Sites

Cynthia, no I hadn't seen this before. A couple of things to note about the electricity structure in Maine that may be helpful to you:

- Maine does not have a State public power authority that owns generation; the state doesn't own a portfolio of generation resources. Some states like NY have Public Power Authorities that do own generation. For instance, NY's Authority was created back in the 1930s to control the hydro resources in that State -- so they actually built and own their hydro units. That puts them in a different position with respect to offering generation service. Because ME historically didn't take that route, we're in a different position now.
- BHE, CMP and MPS no longer own generation and are basically prohibited from owning or controlling generation -- this was a result of restructuring back in 2000. Generation was divested and essentially deregulated and moved into the private marketplace.

Given our current electricity market structure, you're pretty limited in terms of trying to drive the result you want: basically providing some sort of subsidies or inducements to drive the decisions of the data center developer and the owner of some renewable power source.

How about a concept draft that simply describes what you're trying to achieve: A program to encourage the development of a data center in this State powered by indigenous renewable energy sources that utilizes the Three Ring Binder infrastructure and creates jobs.

Jon

From: Cynthia Dill
Sent: Tuesday, January 04, 2011 1:24 PM
To: Clark, Jon
Subject: Fwd: Data Centers at Renewable Energy Sites

Hi. I may have already sent you the below message containing some research.

The vision is a data center at a renewable energy source that utilizes the Three Ring Binder and creates jobs. Does the state have an ownership interest in any feasible location that you know of?

I wonder if companies like Bangor Hydro and CMP who got stimulus money to do things like smart meters have to use or produce a certain amount of "green energy," and if so, whether this might be a source of energy.

For now, you can draft something to direct somebody to do something along these lines. I'm going to try to make a connection with Google directly.

1/4/2011

plagues many data centers where hotspots can mismatch cooling needs, and underused and under-needed servers are burning up energy endlessly. As data center's cut energy costs and reduce carbon emissions, they can also free up capacity from overburdened or inefficient structure.

Other State Legislation

Assembly Bill 617 was introduced in California last year, directing the State Chief Information Officer to establish and enforce a state information technology strategic plan to protect the environment and reduce energy use. Among other duties, the CIO was charged to include a plan for the utilization of sources of renewable energy by state data centers.

Sources

New York Times - [Google to Use Wind Energy to Power Data Centers](#)

[Web Hosting Services Company in need of Renewable Energy Sources for Data Center](#)

Federal Communications Commission – [National Broadband Plan, Chapter on Energy and the Environment](#)

ZD Net - [Smart Grid for data centers better manages electricity to slash IT energy spending, frees-up wasted capacity](#)

Progressive States Network – [Networking the Green Economy: How Broadband and Related Technologies Can Build a Green Economic Future](#)

From: Nathan Newman [<mailto:nnewman@progressivestates.org>]

Sent: Wednesday, July 28, 2010 12:34 PM

To: dillesquire@aol.com

Cc: fcarrion@progressivestates.org

Subject: Data Centers at Renewable Energy Sites

Rep. Dill—Good seeing you and looking around, it does seem like companies like Google are looking to locate data centers at sites of renewable energy. So your data center bill could have applications in a bunch of different states, especially rural ones, where concentrated sources of renewable energy like wind, hydro or solar could attract data centers. -- Nathan

Google Data Centers Co-Locate Near Wind Farms: The New Peanut Butter and Jelly Combo

<http://greeneconomics.blogspot.com/2010/07/google-data-centers-co-locate-near-wind.html>

also <http://earth2tech.com/2010/05/03/google-makes-first-direct-investment-into-clean-power-project/> and

<http://earth2tech.com/2010/05/03/google-makes-first-direct-investment-into-clean-power-project/>